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EXAMINER

SPAHN, GAY

ART UNIT	PAPER NUMBER
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3635

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/613,570

Applicant(s)

QUINN, GERRY

Examiner

Gay Ann Spahn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 23 October 2006 has been entered.

Drawings

Five (5) Replacement Sheets of drawings were received on 23 October 2006. These drawings are not approved and the drawing objections from the previous office action are being repeated as follows.

The drawings are objected to because:

the meaning of the arrowheads in Figs. 1-5 is not clear. See 37 C.F.R. § 1.84(r) wherein it states:

(r) Arrows.

Arrows may be used at the ends of lines, provided that their meaning is clear, as follows:

- (1) On a lead line, a freestanding arrow to indicate the entire section towards which it points;
- (2) On a lead line, an arrow touching a line to indicate the surface shown by the line looking along the direction of the arrow; or
- (3) To show the direction of movement. (Emphasis Added).

The examiner notes that on page 13 of his Remarks section Applicant states that the remaining arrowheads in Fig. 1 are "acceptable because they indicate either distance (WD, L and D), or an area (TP and TDP). The examiner agrees that the arrowheads for the distances "WD", "L", and "D" are acceptable. However, the examiner disagrees that the arrowheads on the end of the lead lines leading from reference character "TP" and "TDP" comply with 37 CFR 1.84(r). The area "TP" is clearly delineated by the cross-hatching and thus, should have a lead line without an arrowhead leading from reference characters "TP" to the area. In addition, the examiner does not see how a "touchdown point" (i.e., "TDP") is an area and thus, there should be a lead line without an arrowhead leading from reference characters "TDP" to the touchdown point.

With respect to Figs. 2-4, Applicants argue that the remaining arrowheads should be permitted as indicating areas, not specific points or structures and requests approval of the remaining legends as being "helpful for understanding the invention, which is complex and subtle" and as greatly improving "the readability of the disclosure." The examiner agrees that the arrowheads for the distance "D" (Fig. 2 and 4) and "L" (Fig. 3) and the first and second array of seabed transponders (Figs. 2 and 3) are appropriate. However, the examiner disagrees that the arrowhead for the pipelay route (Figs. 2 and 4) and intermediate seabed transponder (Fig. 2) are appropriate. The examiner also disagrees that the legends are necessary to a complete understanding of the invention and does not see why reference numerals or characters that are clearly explained in the specification would not suffice (see continued objection below).

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Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to because:

(1) Figs. 1-5 fail to comply with 37 CFR 1.84(o), entitled "Legends," which states in pertinent part, as follows:

Suitable descriptive legends may be used subject to approval by the Office, or may be required by the examiner where necessary for understanding of the drawing. They should contain as few words as possible.

The examiner notes that the legends, such as "Target Position", "First Array of Seabed Transponder", "Pipelay Route", "Intermediate Seabed Transponder (Optional)",

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etc. should be changed to reference numerals and referred to in the specification with the reference numerals.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 18-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 18-20, lines 1-2, the recitation that “no more than one pipe transponder is installed on said pipeline in the installing step” is considered to constitute new matter as not being supported by the specification.

Applicant has not pointed out, nor can the examiner find where in the specification there is support for the recitation that “no more than one pipe transponder is installed on said pipeline in the installing step”.

Indeed, at paragraph no. [0030], the specification clearly states that “[d]uring lay approach to the target area, two (first and second) pipe transponders PTP1 and PTP2 are attached to the flowline in order to land in between the second and third seabed transponders.”

Further, at paragraph no. [0038], the specification states that the “[m]ain advantages, as compared to the prior art method, are: - fewer transponders required: 3 on the seabed and 2 on the flowline” and thus, it appears that the invention requires two pipe transponders in order to function correctly. Therefore, to claim that “no more than one pipe transponders is installed on said pipeline in the installing step” appears to go against the clear teaching of the invention that two pipe transponders are necessary to the invention.

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Claims 21 and 23, lines 1-2, the recitation that "no more seabed transponders than said first and second seabed transponders are installed" is considered to constitute new matter as not being supported by the specification.

Applicant has not pointed out, nor can the examiner find where in the specification there is support for the recitation that "no more seabed transponders than said first and second seabed transponders are installed".

Indeed, at paragraph nos. [0028]-[0029], [0031], [0033], [0037], and [0038], the specification clearly states that:

See Figures 4-5. A first seabed transponder STP1 is arranged on the target position, and then two (second and third) seabed transponders STP2 and STP3 are laid on the pipelay route centreline spaced from the first transponder over a length D' greater than the catenary length L between the TDP and the surface vessel.

A vessel, preferably the laying vessel during her preparation time, installs and determines the exact positions of these 3 seabed transponders and thus the exact distances separating these seabed transponders can be calculated.

A vessel, preferably the laying vessel, and more preferably the laying vessel's ROV (remote operated vehicle: underwater robot) then interrogates each of the first and second pipe transponders and second and third seabed transponders in a relative mode to establish the exact distances between them. In a preferred embodiment of the invention, it is sufficient to determine only the distance between PTP1 and STP2, and the distance between PTP2 and STP3.

The fact that the pipe transponders land on the seabed in between the second and third seabed transponder in this embodiment does not limit the invention. The pipe transponders preferably land close enough to the seabed transponders to be able to establish the length separating them, and therefore can land before or after the seabed transponders.

Preferentially the distance separating the second and third seabed transponders is about 500 ft. Preferentially the distance separating the first and second pipe transponders is about 300 ft. An important feature is that the distance separating the second and third seabed transponders is

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greater than the distance separating the first and second pipe transponders.

Main advantages, as compared to the prior method, are: fewer transponders required: 3 on the seabed and 2 on the flowline

As there is a seabed transponder on the target box, the distance separating the target box from the two other seabed transponders is always accurately known. In the prior art system, the seabed transponders were arranged around the target box, and around the pipeline route but none of them were arranged on the pipeline route centreline; and consequently, it was impossible to use only the distance separating a seabed transponder from a pipe transponder to establish this remaining length of pipeline.

From the above-quoted language of the specification, it appears necessary that the method have three seabed transponders.

Claims 22 and 24, lines 1-2, the recitation that "no more seabed transponders than said first, second and third seabed transponders are installed" is considered to constitute new matter as not being supported by the specification.

Applicant has not pointed out, nor can the examiner find where in the specification there is support for the recitation that "no more seabed transponders than said first, second and third seabed transponders are installed".

Further, it does not appear necessary that the method have only three seabed transponders (i.e., the method would function adequately if there were more than three seabed transponders).

Claims 25 and 26, line 1, the recitation that "no additional seabed transponders are installed" is considered to constitute new matter as not being supported by the specification.

Applicant has not pointed out, nor can the examiner find where in the specification there is support for the recitation that “no additional seabed transponders are installed”.

Indeed, at the paragraphs of the quoted above with respect to the rejection of claims 21 and 23, it appears necessary that the method have three seabed transponders (and not just the one seabed transponder recited in claim 15 or the two seabed transponders recited in claim 17).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18, line 2, the recitation of “the installing step” is vague, indefinite, and confusing as lacking antecedent basis since claim 11 (on which claim 18 depends) recites an installing step at lines 5-6 (i.e., the step of “installing first and second seabed transponders along the pipelay route, the first seabed transponder being near said second position”) and an installing step at line 8 (i.e., the step of “installing a pipe transponder on said pipeline”) and therefore, it is not clear which installing step is being referred back to.

Claim 19, line 2, the recitation of “the installing step” is vague, indefinite, and confusing as lacking antecedent basis since claim 15 (on which claim 19 depends)

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recites an installing step at line 5 (i.e., the step of “installing a seabed transponder along the pipelay route”) and an installing step at line 6 (i.e., the step of “installing a pipe transponder on said pipeline”) and therefore, it is not clear which installing step is being referred back to.

Claim 20, lines 1-2, the recitation that “no more than one pipe transponder is installed on said pipeline in the installing step” is vague, indefinite, and confusing as not being understood since both installing steps recited in claim 1 have to do with the installation of seabed transponders, not pipe transponders.

Claim 20, line 2, the recitation of “the installing step” is vague, indefinite, and confusing as lacking antecedent basis since claim 1 (on which claim 20 depends) recites an installing step at lines 7-8 (i.e., the step of “installing a first seabed transponder on the pipelay route centerline at the second position”) and an installing step at lines 9-11 (i.e., the step of “installing a second seabed transponder near the pipelay route centerline spaced upstream from the first seabed transponder at a distance greater than the catenary length of the pipeline”) and therefore, it is not clear which installing step is being referred back to.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11, 13, 15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by the Applicant's admitted prior art described on page 1, paragraph no. [0004] through page 4, paragraph no. [0018] and illustrated in Prior Art Figs. 1-3 (hereinafter referred to as "APPLICANT'S ADMITTED PRIOR ART").

As to claim 11, APPLICANT'S ADMITTED PRIOR ART discloses a method for offshore pipeline laying (Prior Art Figs. 1-3), wherein the pipeline (shown as having length "L") is being laid on the seabed (bottom of Prior Art Figs. 1 and 3 and Prior Art Fig. 2) by a surface laying vessel (shown unnumbered at top of Prior Art Figs. 1 and 3) from a first position (TDP) on the seabed to a second position (target position) on the seabed, said method establishing the length of pipeline required to be provided from the vessel to reach the second position on the seabed (see paragraph nos. [0016] and [0017]), said method comprising the steps of:

installing first and second seabed transponders (any seabed transponder of the first array and any seabed transponder of the second array) along the pipelay route (the examiner deems any of the seabed transponders in the first and second arrays to be located sufficiently close to the pipelay route to be considered to be "along the pipelay route"), the first seabed transponder being near said second position (the examiner deems any of the seabed transponders in the first array to be sufficiently close to the target position so as to be considered to be "near said second position");

determining the distance separating said first and second seabed transponders (see paragraph no. [0014]);

installing a pipe transponder on said pipeline (see Prior Art Fig. 3 wherein squares denote pipe transponders);

interrogating said second seabed transponder and said pipe transponder to determine the respective distance between them (see paragraph no. [0015]); and

determining from said respective distances separating said second seabed transponders and said pipe transponder, the remaining length of pipeline needed to reach the second position (see paragraph nos. [0016] and [0017]).

As to claim 13, APPLICANT'S ADMITTED PRIOR ART discloses the method of claim 11 as discussed above, and APPLICANT'S ADMITTED PRIOR ART further comprises the steps of:

installing a third seabed transponder (intermediate seabed transponder in Prior Art Fig. 2) along the pipelay route (the examiner deems the intermediate seabed transponder to be sufficiently near the pipelay route to be considered to be "along the pipelay route");

installing a second pipe transponder (any one of the three pipe transponders shown in Prior Art Fig. 3 which has not been deemed the pipe transponder introduced in claim 11) on said pipeline (shown as having length "L") near said first pipe transponder; and

interrogating said third seabed transponder and said second pipe transponder so as to determine the respective distance between them so as to further establish the

remaining length of pipeline needed to reach the second position (see paragraph nos. [0016] and [0017]).

As to claim 15, APPLICANT'S ADMITTED PRIOR ART discloses a method for offshore pipeline laying (Figs. 1-3), and APPLICANT'S ADMITTED PRIOR ART the pipeline (shown as having length "L") is being laid on the seabed (bottom of Prior Art Figs. 1 and 3 and Prior Art Fig. 2) by a surface laying vessel (shown unnumbered at top of Prior art Figs. 1 and 3) from a first position (TDP) on the seabed to a second position (target position) on the seabed, said method for establishing the length of pipeline required to be provided from the vessel to reach the second position on the seabed (see paragraph nos. [0016] and [0017]), said method comprising the steps of:

installing a seabed transponder (any seabed transponder of the first or second arrays) along the pipelay route (the examiner deems any of the seabed transponders in the first and second arrays to be located sufficiently close to the pipelay route to be considered to be "along the pipelay route");

installing a pipe transponder (see Prior Art Fig. 3 wherein squares denote pipe transponders) on said pipeline (shown as having length "L");

interrogating said seabed transponder and said pipe transponder to determine the respective distance between them (see paragraph no. [0015]); and

determining from said respective distance separating said seabed transponder and said pipe transponder, the remaining length of pipeline needed to reach the second position on the seabed (see paragraph nos. [0016] and [0017]).

As to claim 17, APPLICANT'S ADMITTED PRIOR ART discloses the method of claim 15 as discussed above, and APPLICANT'S ADMITTED PRIOR ART further comprises the steps of:

installing another seabed transponder (intermediate seabed transponder in Fig. 2) along the pipelay route (the examiner deems the intermediate seabed transponder to be sufficiently near the pipelay route to be considered to be "along the pipelay route");

installing a second pipe transponder (any one of the three pipe transponders shown in Prior Art Fig. 3 which has not been deemed the pipe transponder introduced in claim 11) on said pipeline (shown as having length "L") near said first pipe transponder; and

interrogating said other seabed transponder and said second pipe transponder so as to determine the respective distance between them so as to further establish the remaining length of pipeline needed to reach the second position (see paragraph nos. [0016] and [0017]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art described on page 1, paragraph no. [0004] through page 4, paragraph no. [0018] and illustrated in prior art Figs. 1-3 (hereinafter referred to as "APPLICANT'S ADMITTED PRIOR ART") in view of KOLB (U.S. Patent No. 3,576,977).

As to claim 1, APPLICANT'S ADMITTED PRIOR ART discloses that a method for offshore pipeline laying (Figs. 1-3), the pipeline (shown as having catenary length "L") is laid on the seabed (bottom of Figs. 1 and 3 and Fig. 2) by a surface laying vessel (shown unnumbered at top of Figs. 1 and 3) from a first position (TDP) on the seabed to a second position (target position) on the seabed for making a connection at said second position to a subsea structure, and presenting a catenary length between the seabed and the laying vessel (shown unnumbered at top of Figs. 1 and 3), said method establishing the length of pipeline (shown as having length "L") required to be provided from the vessel (shown unnumbered at top of Figs. 1 and 3) to reach the second position (target position) on the seabed (see paragraph nos. [0016] and [0017]), said method comprising the steps of:

installing a first seabed transponder (any transponder of first array) near the pipelay route centerline at the second position (target position);

installing a second seabed transponder (any transponder of second array) near the pipelay route centerline spaced upstream from the first seabed transponder at a distance (see Fig. 2) greater than the catenary length (L) of the pipeline;

establishing the positions of the first and second seabed transponders so as to determine the exact distance separating said first and second seabed transponders (see paragraph no. [0014]);

attaching a first pipe transponder (the squares in Fig. 3 represent pipe transponders) on the pipeline (shown as having catenary length "L") and laying the pipeline at the first position so that it will land close to the second seabed transponder (see Fig. 3);

interrogating the second seabed transponder and the first pipe transponder in a relative mode to establish the exact distance between them (see paragraph no. [0015]);

comparing the established distance with the distance separating the first and second seabed transponders to calculate the remaining length of pipeline required to reach the second position (see paragraph no. [0016]);

cutting the pipeline according to said remaining length (see paragraph no. [0017]);

welding the connector to the pipeline (see paragraph no. [0017]); and thereby laying the pipeline to the second position with the connector being at the second position (see paragraph no. [0017]).

However, APPLICANT'S ADMITTED PRIOR ART fails to explicitly disclose installing a first and second seabed transponder on the pipelay route centerline.

KOLB discloses the step of installing transponders on the pipelay route centerline (see centerline of pipelay route (12) in Fig. 1 and col. 3; lines 13-36 and more

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particularly, lines 28-35 wherein "preplaced bottom mounted sonic marker beacons or transponders" are disclosed to be on the centerline of the pipelay route (12)).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method for cutting undersea pipeline to length of APPLICANT'S ADMITTED PRIOR ART by placing the seabed transponders on the centerline of the pipelay route as taught by KOLB in order to minimize the stress on the pipeline and the pipe support structure.

As to claim 2, APPLICANT'S ADMITTED PRIOR ART in view of KOLB discloses the method of claim 1 as discussed above.

APPLICANT'S ADMITTED PRIOR ART in view of KOLB fails to explicitly disclose that the distance (D') is comprised between (L + 300 ft) and (L + 700 ft).

However, it is well settled that changes in size/proportion do not constitute patentable subject matter (see the Manual of Patent Examining Procedure (MPEP) § 2144.04 entitled "LEGAL PRECEDENT AS SOURCE OF SUPPORTING RATIONALE", and subsection (IV)(A), entitled "Changes in Size/Proportion").

See *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F.2d at 1053, 189 USPQ at 148.).

See also *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between

the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.).

Therefore, the examiner deems that it would have been an obvious expedient for one of ordinary skill in the art at the time the invention was made to have modified the method for cutting undersea pipeline to length resulting from APPLICANT'S ADMITTED PRIOR ART in view of KOLB by making the distance (D') between the first and second seabed transponders be between 300 to 700 feet greater than the catenary length (L) of the pipeline in order to allow room for error and since changes in size/proportion (i.e., dimensions) do not constitute patentable subject matter (see also *The Ward Machinery Company v. Wm. Staley Machinery Corporation*, 192 USPQ 505 (DC Md 1976), holding that improvement resulting from a change in size, proportion or degree of element contained in the prior art, no matter how desirable or useful, does not constitute patentable invention).

As to claim 3, APPLICANT'S ADMITTED PRIOR ART in view of KOLB discloses the method of claim 1 as discussed above, and APPLICANT'S ADMITTED PRIOR ART also disclose that a third seabed transponder is arranged on the pipelay route upstream from the second seabed transponder (the second array of seabed transponders shows numerous seabed transponders and the examiner deems the second seabed transponder to be one of the transponders in the second array that is closest to the first array and the third seabed transponder to be one of the transponders in the second array that is farthest from the first array so that the third seabed transponder is upstream of the second seabed transponder).

As to claim 4, APPLICANT'S ADMITTED PRIOR ART in view of KOLB discloses the method of claim 3 as discussed above, and APPLICANT'S ADMITTED PRIOR ART also discloses that a second pipe transponder is attached to the pipeline upstream from the first pipe transponder (Prior Art Fig. 3 shows three pipe transponders with a second being upstream of a first).

As to claim 5, APPLICANT'S ADMITTED PRIOR ART in view of KOLB discloses the method of claim 4 as discussed above, and APPLICANT'S ADMITTED PRIOR ART also discloses that the distance between the first and second pipe transponders is shorter than the distance between the second and third seabed transponders (see Prior Art Fig. 3).

As to claim 6, APPLICANT'S ADMITTED PRIOR ART in view of KOLB discloses the method of claim 4 as discussed above, and APPLICANT'S ADMITTED PRIOR ART also discloses that the pipeline is laid so that the first and second pipe transponders are laid in between the second and third seabed transponders (see Prior Art Fig. 3).

As to claim 7, APPLICANT'S ADMITTED PRIOR ART in view of KOLB discloses the method of claim 1 as discussed above, and APPLICANT'S ADMITTED PRIOR ART also discloses that another pipe transponder is attached to the pipeline to help the positioning of the connector at the second position (see paragraph no. [0017]).

As to claim 8, APPLICANT'S ADMITTED PRIOR ART in view of KOLB discloses the method of claim 4 as discussed above.

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APPLICANT'S ADMITTED PRIOR ART in view of KOLB fails to explicitly disclose that the second and third seabed transponders are spaced about 500 feet apart.

However, it is well settled that changes in size/proportion do not constitute patentable subject matter (see the Manual of Patent Examining Procedure (MPEP) § 2144.04 entitled "LEGAL PRECEDENT AS SOURCE OF SUPPORTING RATIONALE", and subsection (IV)(A), entitled "Changes in Size/Proportion").

See *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F.2d at 1053, 189 USPQ at 148.).

See also *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.).

Therefore, the examiner deems that it would have been an obvious expedient for one of ordinary skill in the art at the time the invention was made to have modified the method for cutting undersea pipeline to length resulting from APPLICANT'S ADMITTED PRIOR ART in view of KOLB by making the second and third seabed transponders be spaced about 500 feet apart in order to optimize the distance between the seabed transponders and since changes in size/proportion (i.e., dimensions) do not constitute

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patentable subject matter (see also *The Ward Machinery Company v. Wm. Staley Machinery Corporation*, 192 USPQ 505 (DC Md 1976), holding that improvement resulting from a change in size, proportion or degree of element contained in the prior art, no matter how desirable or useful, does not constitute patentable invention).

As to claim 9, APPLICANT'S ADMITTED PRIOR ART in view of KOLB
discloses the method of claim 8 as discussed above.

APPLICANT'S ADMITTED PRIOR ART in view of KOLB fails to explicitly disclose that the first and second pipeline transponders are spaced about 300 feet apart.

However, it is well settled that changes in size/proportion (i.e., dimensions) do not constitute patentable subject matter (see the Manual of Patent Examining Procedure (MPEP) § 2144.04 entitled "LEGAL PRECEDENT AS SOURCE OF SUPPORTING RATIONALE", and subsection (IV)(A), entitled "Changes in Size/Proportion").

See *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F.2d at 1053, 189 USPQ at 148.).

See also *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would

not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.).

Therefore, the examiner deems that it would have been an obvious expedient for one of ordinary skill in the art at the time the invention was made to have modified the method for cutting undersea pipeline to length resulting from APPLICANT'S ADMITTED PRIOR ART in view of KOLB by making the first and second pipeline transponders be spaced about 300 feet apart in order to optimize the distance between the pipeline transponders and since changes in size/proportion (i.e., dimensions) do not constitute patentable subject matter (see also *The Ward Machinery Company v. Wm. Staley Machinery Corporation*, 192 USPQ 505 (DC Md 1976), holding that improvement resulting from a change in size, proportion or degree of element contained in the prior art, no matter how desirable or useful, does not constitute patentable invention).

As to claim 10, APPLICANT'S ADMITTED PRIOR ART in view of KOLB discloses the method of claim 9 as discussed above, and APPLICANT'S ADMITTED PRIOR ART in view of KOLB also discloses that the pipeline is laid so that the first and second pipe transponders are laid in between the second and third seabed transponders (see Prior Art Fig. 3 - the second array of seabed transponders shows numerous seabed transponders and the examiner deems the second seabed transponder to be one of the transponders in the second array that is closest to the first array and the third seabed transponder to be one of the transponders in the second array that is farthest from the first array so that the first and second pipe transponders are between the second and third seabed transponders).

As to claim 14, APPLICANT'S ADMITTED PRIOR ART in view of KOLB discloses the method of claim 4 as discussed above, and APPLICANT'S ADMITTED PRIOR ART also discloses that a third pipe transponder is attached to the pipeline to help the positioning of the connector at the second position (see paragraph no. [0017]).

As to claim 11, APPLICANT'S ADMITTED PRIOR ART discloses a method for offshore pipeline laying (Prior Art Figs. 1-3), wherein pipeline (shown as having length "L") is being laid on the seabed (bottom of Prior Art Figs. 1 and 3 and Prior Art Fig. 2) by a surface laying vessel (shown unnumbered at top of Prior Art Figs. 1 and 3) from a first position (TDP) on the seabed to a second position (target position) on the seabed, said method establishing the length of pipeline required to be provided from the vessel to reach the second position on the seabed (see paragraph nos. [0016] and [0017]), said method comprising the steps of:

installing first and second seabed transponders (any seabed transponder of the first array and any seabed transponder of the second array) along the pipelay route (the examiner deems any of the seabed transponders in the first and second arrays to be located sufficiently close to the pipelay route to be considered to be "along the pipelay route"), the first seabed transponder being near said second position (the examiner deems any of the seabed transponders in the first array to be sufficiently close to the target position so as to be considered to be "near said second position");

determining the distance separating said first and second seabed transponders (see paragraph no. [0014]);

installing a pipe transponder on said pipeline (see Prior Art Fig. 3 wherein squares denote pipe transponders);

interrogating said second seabed transponder and said pipe transponder to determine the respective distance between them (see paragraph no. [0015]); and

determining from said respective distances separating said second seabed transponders and said pipe transponder, the remaining length of pipeline needed to reach the second position (see paragraph nos. [0016] and [0017]).

However, APPLICANT'S ADMITTED PRIOR ART may fail to explicitly disclose, depending upon how one of ordinary skill in the art would interpret "sufficiently near", that the seabed transponders are arranged sufficiently near the pipelay route centerline.

KOLB discloses that the seabed transponders are arranged sufficiently near the pipelay route centerline (see centerline of pipelay route (12) in Fig. 1 and col. 3, lines 13-36 and more particularly, lines 28-35 wherein "preplaced bottom mounted sonic marker beacons or transponders" are disclosed to be on the centerline of the pipelay route (12)).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method for cutting undersea pipeline to length of APPLICANT'S ADMITTED PRIOR ART by placing the seabed transponders on the centerline of the pipelay route as taught by KOLB in order to minimize the stress on the pipeline and the pipe support structure.

As to claim 12, APPLICANT'S ADMITTED PRIOR ART in view of KOLB discloses the method of claim 11 as discussed above, and APPLICANT'S ADMITTED

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PRIOR ART in view of KOLB discloses that the seabed transponders are arranged on the pipelay route centerline (see centerline of pipelay route (12) in Fig. 1 and col. 3, lines 13-36 and more particularly, lines 28-35 wherein "preplaced bottom mounted sonic marker beacons or transponders" are disclosed to be on the centerline of the pipelay route (12)).

As to claim 13, APPLICANT'S ADMITTED PRIOR ART in view of KOLB discloses the method of claim 11 as discussed above, and APPLICANT'S ADMITTED PRIOR ART in view of KOLB further comprises the steps of:

installing a third seabed transponder (intermediate seabed transponder in Prior Art Fig. 2) along the pipelay route (the examiner deems the intermediate seabed transponder to be sufficiently near the pipelay route to be considered to be "along the pipelay route");

installing a second pipe transponder (any one of the three pipe transponders shown in Prior Art Fig. 3 which has not been deemed the pipe transponder introduced in claim 11) on said pipeline (shown as having length "L") near said first pipe transponder; and

interrogating said third seabed transponder and said second pipe transponder so as to determine the respective distance between them so as to further establish the remaining length of pipeline needed to reach the second position (see paragraph nos. [0016] and [0017]).

As to claim 15, APPLICANT'S ADMITTED PRIOR ART discloses a method for offshore pipeline laying (Prior Art Figs. 1-3), wherein pipeline (shown as having length

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"L") is being laid on the seabed (bottom of Prior Art Figs. 1 and 3 and Prior Art Fig. 2) by a surface laying vessel (shown unnumbered at top of Prior Art Figs. 1 and 3) from a first position (TDP) on the seabed to a second position (target position) on the seabed, said method for establishing the length of pipeline required to be provided from the vessel to reach the second position on the seabed (see paragraph nos. [0016] and [0017]), said method comprising the steps of:

- installing a seabed transponder (any seabed transponder of the first or second arrays) along the pipelay route (the examiner deems any of the seabed transponders in the first and second arrays to be located sufficiently close to the pipelay route to be considered to be "along the pipelay route");

- installing a pipe transponder (see Prior Art Fig. 3 wherein squares denote pipe transponders) on said pipeline (shown as having length "L");

- interrogating said seabed transponder and said pipe transponder to determine the respective distance between them (see paragraph no. [0015]); and

- determining from said respective distance separating said seabed transponder and said pipe transponder, the remaining length of pipeline needed to reach the second position on the seabed (see paragraph nos. [0016] and [0017]).

However, APPLICANT'S ADMITTED PRIOR ART fails to explicitly disclose that the seabed transponders are arranged sufficiently near the pipelay route centerline.

KOLB discloses that the seabed transponders are arranged sufficiently near the pipelay route centerline (see centerline of pipelay route (12) in Fig. 1 and col. 3, lines 13-36 and more particularly, lines 28-35 wherein "preplaced bottom mounted sonic

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marker beacons or transponders” are disclosed to be on the centerline of the pipelay route (12)).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method for cutting undersea pipeline to length of APPLICANT'S ADMITTED PRIOR ART by placing the seabed transponders on the centerline of the pipelay route as taught by KOLB in order to minimize the stress on the pipeline and the pipe support structure.

As to claim 16, APPLICANT'S ADMITTED PRIOR ART in view of KOLB discloses the method of claim 15 as discussed above, and APPLICANT'S ADMITTED PRIOR ART in view of KOLB further discloses that the seabed transponder is arranged on the pipelay route centerline (see centerline of pipelay route (12) in Fig. 1 and col. 3, lines 13-36 and more particularly, lines 28-35 wherein “preplaced bottom mounted sonic marker beacons or transponders” are disclosed to be on the centerline of the pipelay route (12)).

As to claim 17, APPLICANT'S ADMITTED PRIOR ART in view of KOLB discloses the method of claim 15 as discussed above, and APPLICANT'S ADMITTED PRIOR ART in view of KOLB further comprises the steps of:

installing another seabed transponder (intermediate seabed transponder in Fig. 2) along the pipelay route (the examiner deems the intermediate seabed transponder to be sufficiently near the pipelay route to be considered to be “along the pipelay route”);

installing a second pipe transponder (any one of the three pipe transponders shown in Prior Art Fig. 3 which has not been deemed the pipe transponder introduced in

claim 11) on said pipeline (shown as having length "L") near said first pipe transponder;
and

interrogating said other seabed transponder and said second pipe transponder
so as to determine the respective distance between them so as to further establish the
remaining length of pipeline needed to reach the second position (see paragraph nos.
[0016] and [0017]).

Response to Arguments

Applicant's arguments filed 23 October 2006 have been fully considered but they
are not persuasive.

At page 14, line 21 through page 15, line 4, Applicants state that independent
claims 11 and 15 have been amended to recite the step of "determining from said
respective distance separating said seabed transponder and said pipe transponder, the
remaining length of pipeline needed to reach the second position on the seabed" and
that the recited method step is not performed by the background art. The examiner
disagrees. At paragraph nos. [0012]-[0018], the prior art method is described as
follows:

The known method consists in determining the exact position (two
coordinates) of the pipe end at the TDP where it first touches the seabed
and comparing it with the known coordinates of the target position to
determine at what moment to cut the flowline and weld the connection.

On the seabed, a first array of 6 seabed transponders are arranged
around the target position. A second array are arranged on the seabed
around the predicted TDP upstream from the target position at a distance
 D' greater than L . If need be, an intermediate transponder can be
arranged in between the two arrays for allowing communication between
them.

To be able to determine the exact position of the flowline on the seabed, the exact position of these seabed transponders must be known. In order to do so, the survey vessel determines exactly the position of two seabed transponders per array and then based on these two known seabed transponders, is able by interrogating the seabed transponders to determine the exact position of the other seabed transponders by comparing the distance separating them from each other. Installation of the seabed transponders and determination of their positions normally can take about two days and will require a survey vessel.

Then 3 pipe transponders are attached to the pipe so as to land within the second array of seabed transponders. When the pipe transponders land on the sea bed, a survey vessel (not shown) interrogates the seabed transponders of the second array and the pipe transponders in a relative mode to determinate the length separating each of the seabed transponders from the pipe transponders. When all the lengths are known, the exact position of the pipe transponders on the seabed is accurately known. To know the exact coordinates of a pipe transponder, requires the use of at least two seabed transponders. Preferably, three pipe transponders and six seabed transponders are used for redundancy and double checking purposes.

With the exact position of the pipe transponder(s), it is possible to determine the remaining length of flowline required to reach the target position by comparing the coordinates of the target position with the coordinates of the pipe transponders.

When this remaining flowline length is reached, the flowline is cut on the laying vessel, the connection means is welded to the flowline and a fourth transponder (not shown) is attached to this connection means. The pipe is then dropped onto the seabed. The fourth pipe transponder is used to position accurately the pipe connection means in the target box by determining again the exact position of this fourth pipe transponder using the first array of seabed transponders and comparing the resulting coordinates with the coordinates of the target position.

This prior art method gives very good results. Unfortunately, it is time-consuming, requires an additional vessel, typically a survey vessel and requires at least 2 days of vessel work before and after laying to install and recover the seabed transponders and requires more than 16 transponders (2.times.6 seabed transponders and 4 pipe transponders).

Thus, it is the examiner's position that the prior art method only determines the "exact coordinates" of the transponders and target position in order to determine the

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distances between them and is clearly doing the same thing that the present invention is doing.

On the bottom of page 15 through the top of page 16, Applicant argues that KOLB has "nothing to do with a method for measuring or cutting an undersea pipe to length and discloses nothing relevant to the methods of claims 1, 11, and 15. The examiner disagrees. KOLB discloses a system and method for controlling the positioning of a pipelaying vessel. In controlling the pipelaying vessel, KOLB is also controlling the laying of the pipeline and thus, is entirely relevant to the present invention.

On page 16, lines 7-26, Applicant argues that neither APPLICANT'S ADMITTED PRIOR ART nor KOLB disclose claim 1's steps of "interrogating said second seabed transponder and said pipe transponder to determine the relative distance between them; and comparing the established distance with the distance separating the first and second seabed transponders to calculate the remaining length of pipeline required to reach the second position." After stating that neither APPLICANT'S ADMITTED PRIOR ART nor KOLB can accomplish the interrogating and comparing steps, Applicant then proceed to discuss only KOLB. However, it is APPLICANT'S ADMITTED PRIOR ART that the examiner has said discloses the interrogating and comparing steps. The examiner has clearly set forth that the interrogating step is disclosed by APPLICANT'S ADMITTED PRIOR ART at paragraph no. [0015] of the specification and the comparing step is disclosed by APPLICANT'S ADMITTED PRIOR ART at paragraph no. [0016].

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Applicant has failed to establish any reason why APPLICANT'S ADMITTED PRIOR ART fails to disclose the interrogating and comparing steps.

Finally, Applicant argues that claims 2, 8 and 9 are allowable because the dimensions disclosed therein are not mere trivial variations and are not disclosed by the prior art. The examiner points Applicant's attention to the Manual of Patent Examining Procedure (MPEP) § 2144.04, entitled "LEGAL PRECEDENT AS SOURCE OF SUPPORTING RATIONALE", wherein examples directed to various common practices which the court has held normally require only ordinary skill in the art and hence are considered routine expedients are discussed. More particularly, in subsection (IV)(A), entitled "Changes in Size/Proportion", discusses that changes in size/proportion (i.e., dimensions) require only ordinary skill in the art and hence are considered routine expedients.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gay Ann Spahn whose telephone number is (571)-272-7731. The examiner can normally be reached on Monday through Thursday, 8:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Naoko N. Slack can be reached on (571)-272-6848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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^{GAS}
Gay Ann Spahn, Patent Examiner
December 5, 2006

Robert Canfield
Primary Examiner

